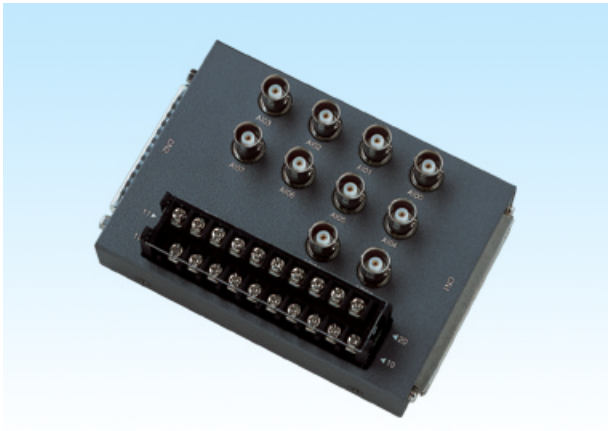
BNC Connectors for Analog Multi-Function Board

ATP-8



ATP-8 is a BNC terminal stand only for AD12-8(PM) of our company. Analog input 8ch (ch0-ch7) and analog output 2ch (ch0-ch1) can be used. By using this terminal stand, connection with an external signal can be performed easily.

Features

- The compact design which does not become obstructive even if it puts on a desk.
  It is the small BNC connector terminal stand box which can be used being able to put beside a Notebook PC.
  Moreover, since it is separable with a connector, a cable is convenient to carry.
- Connection of an external signal is easy.
  It is possible (digital signal is M3 screw stop) in an input in a BNC cable about an analog signal.
- A signal name seal is appended.
  The signal name seal is appended to the terminal stands of a digital signal. By sticking a signal name seal, correspondence with a signal name is known at a glance.

Packing List

- ATP-8 Termination Panel - 1
- This User's Manual - 1
- Signal name label sheet - 1

Specification

ATP-8 Basic specification

Items	Specification
Supported Products	ADA16-32/2(PCI)F, ADA16-32/2(CB)F, AD12-8(PM)
Analog Input	8ch (BNC connector, AI00 to AI07)
Analog Output	2ch (BNC connector, AO00 to AO01)
Digital Input	4channels (Screw terminals, DI00 to DI03)
Digital Output	4channels (Screw terminals, DI00 to DI03)
Counter input and output	1ch (Screw terminals, CNTUP,CNTCLK,CNTOUT)
Operating Conditions	0 to 50° C , 10 to 90%RH (no condensation)
Dimensions (mm)	127(W) x 40.1(D) x 88(H) (Not include the height of screw terminal block and rubber feet)
Weight	420g

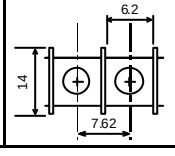
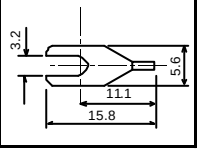
Specification of interface connector (CN1)

Support products	ADA16-32/2(PCI)F, ADA16-32/2(CB)F
Type of Connector	PCR-E96LMD
Type of mating connector	PCS-E96LKPA
Connecting Cable	ADA16-32/2(PCI)F : PCB96-**PS, PCB96-**P(Option) ADA16-32/2(CB)F : PC-Card Bundled cable

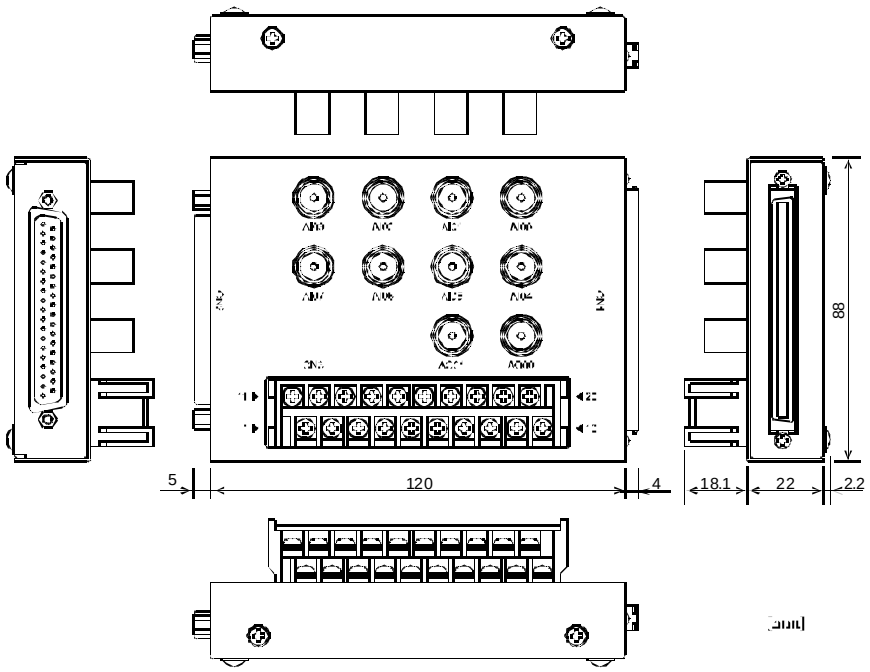
Specification of interface connector (CN2)

Support products	AD12-8(PM)
Type of Connector	37pin Female D-SUB Connector
Nut Parts	#4-40UNC Screws Nuts
Type of mating connector	37pin Male D-SUB Connector
Connecting Cable	AD12-8(PM) : PC-Card Bundled cable

Specification of terminal stand

Terminal	OBU-553-20P mfd by Osada	Suitable Y-type terminal	C3A mfd by JST Mfg. Co., Ltd.
Screw type	M3	Dimension of Y-type terminal [mm]	
Dimensions of Terminal [mm]			

Dimensions and Connector Layout



Connection Drawing

ADA16-32/2(PCI)F ADA16-32/2(CB)F	ATP-8	AD12-8(PM)
Analog Input 00 to 07	AI00 to 07	Analog Input 0 to 7
Analog Output 00 to 01	AO00 to 01	Analog Output 0 to 1
Digital Input 00 to 03	DI00 to 03	Digital Input 0 to 3
Digital Output 00 to 03	DO00 to 03	Digital Output 0 to 3
Analog Ground	Analog Ground	Analog Ground
AI External Start Trigger Input	AISTART	
AI External Stop Trigger Input	AISTOP	
AI External Sampling Clock Input	AIEXCLK	External Sampling Clock Input
AO External Start Trigger Input	AOSTART	
AO External Stop Trigger Input	AOSTOP	
AO External Sampling Clock Input	AOEXCLK	
Counter Gate Control Input	CNTGATE	
Counter Up Clock Input	CNTUPCLK	
Counter Output	CNTOUT	Digital Ground
Digital Ground	DGND	
Reserved	Reserved	

Connect an ADA16-32/2(PCI)F Board or an ADA16-32/2(CB)F PC-Card

Terminal Pin and the Related Board/PC-Card Connector Pin Assignment

Signal name on ATP-8	Description	Signal name on ADA16-32/2(xx)F
AI00 to AI07	BNC connectors for analog inputs	Analog Input00 to Analog Input07
AO00 to AO01	BNC connectors for analog outputs	Analog Output00 to Analog Output01
AISTART	Trigger input signal that starts one of analog to digital conversion sampling transactions.	AI External Start Trigger Input
AISTOP	Trigger input signal that stops an on going analog to digital conversion sampling transaction.	AI External Stop Trigger Input
AIEXCLK	Clock input signal for analog to digital conversion transactions	AI External Sampling Clock Input
AOSTART	Trigger input signal that starts one of digital to analog conversion sampling transactions.	AO External Start Trigger Input
AOSTOP	Trigger input signal that stops an on going digital to analog conversion sampling transaction.	AO External Stop Trigger Input
AOEXCLK	Clock input signal for digital to analog conversion transactions	AO External Sampling Clock Input
DI00 to DI03	Digital input signals	Digital Input00 to Digital Input03
DO00 to DO03	Digital output signals	Digital Output00 to Digital Output03
CNTGATE	Counter gate control input signal	Counter Gate Control Input
CNTUPCLK	Pulse input signal for Up counting transaction	Counter Up Clock Input
CNTOUT	Counter output signal	Counter Output
DGND	Ground for all the digital signals	Digital Ground
Reserved	Reserved	Reserved

Analog input signals (AI00 to AI07) and Analog output signals (AO00 to AO01)

Only the first eight channels in thirty-two channels of analog input signals can be connected through this ATP-8 terminal box.
All two analog output signals can be connected through this terminal box.

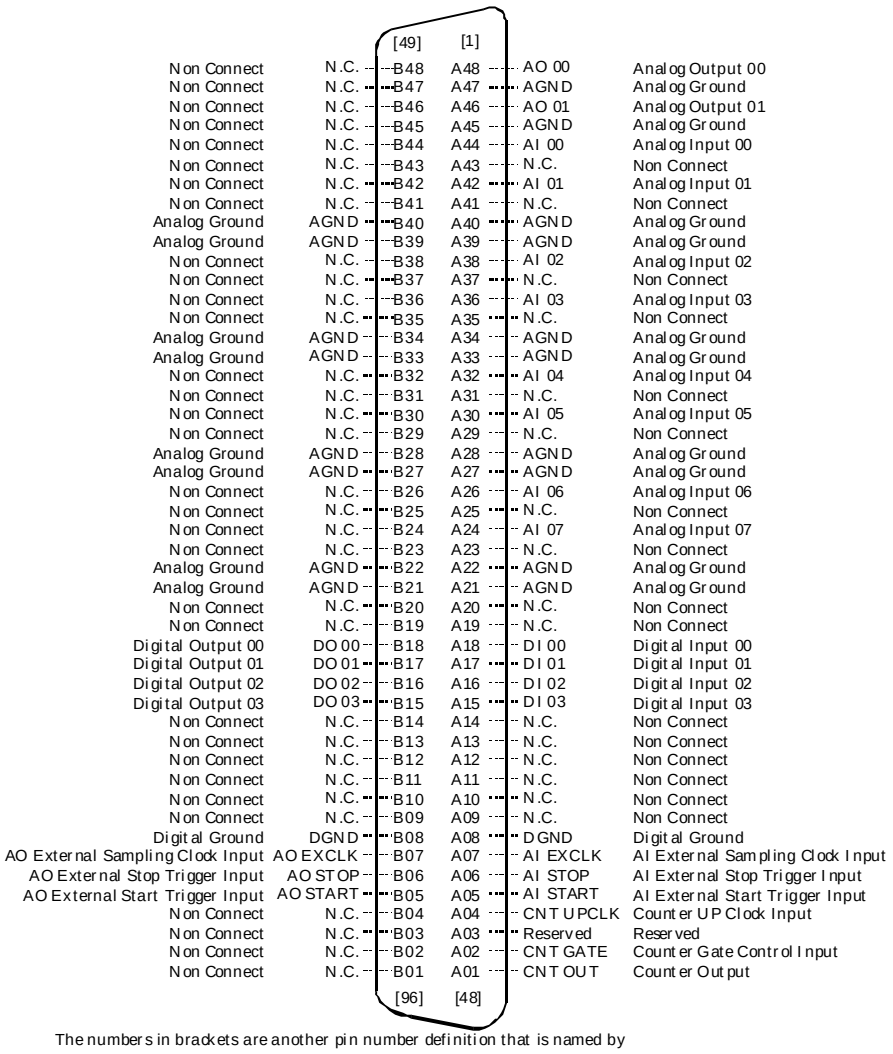
Digital input and output signals (DI00 to DI03, DO00 to DO03, CNT**, AI**, AO**)

For an ADA16-32/2(PCI)F board, only four in of its eight digital input signals, four out of its eight digital output signals, one counter of its two counter signals and all of its trigger signals can be connected through this ATP-8 terminal box.
For an ADA16-32/2(CB)F card, all of its digital signals are supported.

Pin Assignment of Digital Input and Output Signals (CN3)

11	12	13	14	15	16	17	18	19	20
AISTOP	AIEXCLK	AOSTOP	AOEXCLK	DI01	DI03	DO01	DO03	CNTGATE	CNTUPCLK
1	2	3	4	5	6	7	8	9	10
AISTART	DGND	AOSTART	DGND	DI00	DI02	DO00	DO02	CNTOUT	Reserved

Pin Assignment of Connector CN1



The numbers in brackets are another pin number definition that is named by connector manufacture of Honda Thushin Kogyo co., ltd.

Description of Signals (CN1)

Analog Input00 to Analog Input07	Analog input signals. The number corresponds to its channel number.
Analog Output00 to Analog Output01	Analog output signals. The number corresponds to its channel number.
Analog Ground	Ground for analog input and output signals.
AI External Start Trigger Input	Trigger input signal that starts one of analog to digital conversion sampling transactions.
AI External Stop Trigger Input	Trigger input signal that stops an on going analog to digital conversion sampling transaction.
AI External Sampling Clock Input	Clock input signal for analog to digital conversion transactions
AO External Start Trigger Input	Trigger input signal that starts one of digital to analog conversion sampling transactions.
AO External Stop Trigger Input	Trigger input signal that stops an on going digital to analog conversion sampling transaction.
AO External Sampling Clock Input	Clock input signal for digital to analog conversion transactions
Digital Input00 to Digital Input03	Digital input signals
Digital Output00 to Digital Output03	Digital output signals
Counter Gate Control Input	Counter gate control input signal
Counter Up Clock Input	Pulse input signal for Up counting transaction
Counter Output	Counter output signal
Digital Ground	Ground for all the digital signals
Reserved	Reserved
N.C.	Not connected

Pin Assignment of Digital Signal Connector CN3

11	12	13	14	15	16	17	18	19	20
AISTOP	AIEXCLK	AOSTOP	AOEXCLK	DI01	DI03	DO01	DO03	CNTGATE	CNTUPCLK
1	2	3	4	5	6	7	8	9	10
AISTART	DGND	AOSTART	DGND	DI00	DI02	DO00	DO02	CNTOUT	Reserved

Connect an AD12-8(PM) PC-Card

Terminal Pin and AD12-8(PM) PC-Card Connector Pin Assignment

Signal name on ATP-8	Description	Signal name of AD12-8(PM)
AI00 to AI07	BNC connectors for analog inputs	Analog Input0 to Analog Input7
AO00 to AO01	BNC connectors for analog outputs	Analog Output0 to Analog Output1
AISTART	Trigger input signal that sta rts one of analog to digital conversion sampling transactions.	N/A
AISTOP	Trigger input signal that stops an on going analog to digital conversion sampling transaction.	N/A
AIEXCLK	Clock input signal for analog to digital conversion transactions	External Sampling Clock Input
AOSTART	Trigger input signal that starts one of digital to analog conversion sampling transactions.	N/A
AOSTOP	Trigger input signal that stops an on going digital to analog conversion sampling transaction.	N/A
AOEXCLK	Clock input signal for digital to analog conversion transactions	N/A
DI00 to DI03	Digital input signals	Digital Input0 to Digital Input3
DO00 to DO03	Digital output signals	Digital Output0 to Digital Output3
CNTGATE	Counter gate control input signal	N/A
CNTUPCLK	Pulse input signal for Up counting transaction	N/A
CNTOUT	Counter output signal	N/A
DGND	Ground for all the digital signals	Digital Ground
Reserved	Reserved	N/A

Analog input and output signals (AI00 to AI07, AO00 to AO01)

Connect the eight analog input signals and two analog output signals.

Digital input and output signals (DI00 to DI03, DO00 to DO03)

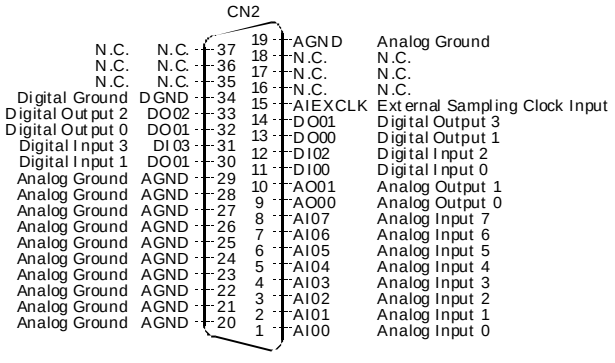
For connecting the four digital input signals, four digital output signals and a clock input signal for analog to digital conversion transaction.

Nor other signals can be connected.

Pin Assignment of Digital Input and Output Signals (CN3)

11	12	13	14	15	16	17	18	19	20
Reserved	AIEXCLK	Reserved	Reserved	DI01	DI03	DO01	DO03	Reserved	Reserved
1	2	3	4	5	6	7	8	9	10
Reserved	DGND	Reserved	DGND	DI00	DI02	DO00	DO02	Reserved	Reserved

Pin Assignment of CN2



Description of Signals (CN2)

Analog Input0 to Analog Input7	Analog input signals. The number corresponds to its channel number.
Analog Output0 to Analog Output1	Analog output signals. The number corresponds to its channel number.
Analog Ground	Ground for analog input and output signals.
Digital Input0 to Digital Input3	Digital input signals
Digital Output0 to Digital Output3	Digital output signals
External Sampling Clock Input	Clock input signal for digital to analog conversion transactions
Digital Ground	Ground for all the digital signals
N.C.	Not connected

Pin Assignment of Digital Input and Output Signals (CN3)

11	12	13	14	15	16	17	18	19	20
Reserved	AIEXCLK	Reserved	Reserved	DI01	DI03	DO01	DO03	Reserved	Reserved
1	2	3	4	5	6	7	8	9	10
Reserved	DGND	Reserved	DGND	DI00	DI02	DO00	DO02	Reserved	Reserved